

## COLLABORATIVE VIDEO DELIVERY OVER HETEROGENEOUS NETWORKS

### ABSTRACT OF THE DISCLOSURE

There is provided a system for collaboratively delivering a  
5 video stream over a heterogeneous network. The video stream  
includes a plurality of frames. The system includes a session  
controller for synchronizing with client devices, receiving  
messages, and outputting encoder control commands based on the  
messages. The system further includes a plurality of encoders.  
10 Each encoder is dedicated to a corresponding one of the client  
devices for receiving user control commands from the  
corresponding one of the client devices that correspond to a  
playback of the video stream, outputting the messages based on  
the user control commands, and respectively controlling a  
15 transmission of the video stream to the corresponding one of the  
client devices using a shared timeline, including respectively  
and dynamically transmitting or discarding each of the plurality  
of frames so as to cooperatively maintain a minimum quality of  
service for all of the client devices.